Health Insurance Coverage and the Receipt of Emergency Contraception Counseling Among United States Women

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1. Introduction

Approximately half of all pregnancies within the U.S. every year are unintended—defined as either mistimed or entirely unwanted [1, 2]. Unintended pregnancies pose significant health, social, and economic concerns in the United States, as they can result in maternal or infant problems throughout the pregnancy and during the birth [3]. Some of the health concerns regarding unintended pregnancies include a delay in seeking prenatal care, smoking or drinking alcohol while pregnant, low infant birth weight related to prematurity, and physical and mental developmental delays [3]. Because of this, Healthy People 2020 has identified the reduction of unintended pregnancies as one of its goals for family planning, and one approach to achieving this goal is to counsel women on methods that are available to prevent pregnancy [4].

Emergency contraception (EC) is one available and effective method that women can use in order to prevent an unintended pregnancy when it is taken within a short period of contraceptive failure or unprotected sex [5]. Currently there are four approved emergency contraceptives available [5]. Adults have access to purchase all four of these without a prescription, while persons who are at least 17 years old only have access to purchase Plan B One-Step ® without a prescription [5]. Three of the four products, including Plan B One-Step ® , are indicated for use within 72 hours of unprotected sex, while the fourth product, Ella ®, can be taken as many as 5 days after unprotected sex [5]. When taken correctly, EC can reduce the likelihood of pregnancy by at least 75%, and it is most effective if it is taken within 24 hours following unprotected sex [6]. EC is made of low level hormones that are found in ordinary birth control pills, thus there is a minimal risk for adverse reactions in most women [6]. If implantation

of the egg has occurred and thus established a pregnancy, EC does not abort the pregnancy [6].

Although EC has been proven to be safe and effective, many women do not have sufficient knowledge regarding EC and how it works in order to prevent an unintended pregnancy because they have not received counseling from a healthcare provider [6]. Previous research done in California discovered that only 29% of the group of women who were at the highest risk for having an unintended pregnancy had any knowledge regarding EC [7]. Furthermore, research of the 2002 National Survey of Family Growth (NSFG) found only 3% of the female respondents reported they had received EC information or counseling in the prior 12 months [8]; a rate that remained unchanged in research of the 2006-2008 NSFG [9]. The purpose of EC counseling is to provide women with the awareness and knowledge regarding how EC works, how to obtain EC if they have had unprotected sex or contraceptive failure, and how to properly use EC. This counseling for women at risk of an unintended pregnancy is extremely beneficial when considering that EC can be a significant factor in reducing the number of abortions performed in the United States [6]. Research indicates that women who have received counseling about EC within the past 12 months were more likely to have used EC to prevent a pregnancy [8] and in 2000 alone, approximately 51,000 abortions were avoided because EC was used in order to prevent pregnancy [6, 10].

Health care providers' knowledge, attitudes, and beliefs have been found to interfere with women's exposure to and use of EC [11]. For example, research has found women's likelihood to receive EC counseling from a healthcare provider may depend on their sociodemographics (e.g. age, race, ethnicity, marital status, education, work status, poverty level), religiosity of the female who is receiving care, and prior sexual and reproductive health history (e.g. number of pregnancies, number of lifetime male partners, abortion history, age at first sexual intercourse, number of births, and contraceptive method used) [9]. However, there is limited research about the association between health insurance and the receipt of EC

counseling, although studies have indicated a woman's insurance status influences her opportunities to take advantage of contraceptive methods. Findings have indicated that younger women who were uninsured were less likely than their peers who had private insurance or Medicaid to use a prescription contraceptive method, although the consistency of insurance coverage over one year did not have a significant effect on the use of a prescription contraceptive [12]. Rates of preventive counseling have been shown to be higher in patients who have insurance as well as a usual source of care compared to those who have neither insurance nor a usual source of care [13]. Also, 46% of private and 21% of public healthcare providers have identified insurance reimbursement as an obstacle in the provision of contraceptive counseling, because they report that they do not have sufficient time to include counseling in their treatment of patients [14]. This is consistent with the finding that public providers offer a wider range of reproductive health care services in general compared to private healthcare providers [14]. While these statistics are troubling, it highlights the effect that insurance may have on the provision of counseling by healthcare providers, and it emphasizes the need to eliminate the discrepancies among private and public healthcare providers. The purpose of this study is to examine the associations between type of health insurance (public, private, none) and the receipt of EC counseling among women aged 15-44 years. This study is assessing the role of health insurance in ensuring that all women have equal knowledge regarding EC. Until all women have the knowledge about how to use and obtain EC to prevent an unintended pregnancy, they will not have an equal ability to make an educated decision regarding methods of post-intercourse pregnancy prevention.

2. Methods

This research study was performed using a correlational study design with cross-sectional secondary data from the 2006-2008 National Survey of Family Growth (NSFG). The

NSFG is a community survey that focuses on family planning, childbearing, fertility, and the contraceptive practices of men and women aged 15-44 years in the United States [15]. Black and Hispanic men and women as well as people aged 15-19 years old were oversampled in order to ensure a nationally representative sample. Data for the NSFG are collected on new samples yearly via individual household interviews conducted by females. Since this study is looking at the receipt of emergency contraception counseling among women, only the data provided by the female respondents was used. There were 7356 female respondents who participated in the 2006-2008 NSFG, all of whom were asked the question regarding whether or not they had received EC counseling in the past 12 months. Subjects with missing data on the outcome variable of interest were not included in this study (*n*=48) for a final sample size of 7308 respondents.

The outcome variable was the receipt of emergency contraception counseling from a healthcare provider within the 12 months prior to the NSFG data collection (yes=1). Female respondents were asked if they had received counseling or information about EC or the 'Morning-after pill' or Plan B ® in the past 12 months. The labels assigned to their answers were "yes," or "no." The independent variables of interest were the insurance type (public, private, none) and insurance consistency over the prior 12 months; measurement was consistent with prior research [12]. Public insurance was defined as insurance with Medicaid, SCHIP, Medicare, military health care or any other government plan. Private insurance was defined as coverage that was individually purchased or employer-based. Inconsistent insurance was evaluated by asking the respondents if they lacked insurance coverage at any point during the 12 months prior to the interview. The respondents who answered "yes" were considered to have inconsistent coverage. Independent control variables includes age (15-44 years), race and ethnicity (non-Hispanic black, Hispanic, non-Hispanic other, non-Hispanic white - reference), income to poverty ratio (0-100%, 101-200%, 201-300%, 301-400% and greater than

400%- reference), marital status (married, cohabitating, single), urban/suburban residency (yes=1) , ever engaged in vaginal intercourse (yes=1) multiple sex partners (3 or more vaginal sex partners in lifetime), and number of previous pregnancies. Analysis of the data used descriptive statistics to examine both the prevalence of counseling receipt and the characteristics of the sample. Multivariate logistic regression analysis was employed using weights to adjust for the complex survey design to examine the associations between insurance type and consistency and receipt of EC counseling. Data analyses were conducted using SAS statistical software, version 9.2.

3. Results

Table 1

Characteristics of US women 15-44 years of age, 2006-2008 NSFG, N=7308

	Unweighted *n*	Weighted % (S.E.)
Received EC Counseling		
Yes	307	3.0 (0.4)
No	7001	97.0 (0.4)
Type of Insurance		
Private	4161	62.4 (2.1)
Public	1688	17.8 (1.2)
Uninsured	1459	19.7 (1.4)
Consistency of Insurance Coverage		
Consistent over past 12 months	5262	73.0 (1.4)
Inconsistent over past 12 months	2046	27.0 (1.4)
Race and ethnicity		
Hispanic	1600	16.8 (2.5)
Non-Hispanic black	1371	13.7 (1.4)
Non-Hispanic “other”	573	8.5 (1.3)
Non-Hispanic white	3764	61.0 (2.5)
Income to poverty ratio		
0-100%	1918	22.0 (1.2)
101-200%	1721	22.5 (0.9)
201-300%	1355	18.6 (0.8)
301-400%	1095	18.8 (0.9)
401% and greater	1219	18.0 (0.9)
Marital Status		
Married	2473	43.8 (1.3)
Cohabitating	809	11.1 (0.8)
Single	4026	45.1 (1.3)
Residency in an Urban Area		
Yes	5934	78.5 (2.2)

No	1374	21.5 (2.2)
Ever had vaginal intercourse		
Yes	6311	86.4 (1.3)
No	997	13.6 (1.3)
Interview conducted in Spanish		
Yes	561	6.8 (1.3)
No	6747	93.2 (1.3)
3 or More Lifetime Sexual Partners		
Yes	4165	54.7 (1.9)
No	3143	45.3 (1.9)

	Unweighted *n*	Mean (S.E.)
Age	7308	29.7 (0.2)
Number of pregnancies	7308	1.8 (0.6)

The prevalence of the receipt of EC counseling among the 7356 female respondents is presented in Table 1 along with the characteristics of the sample. Only 3% of the women aged 15-44 years old reported that they had received EC counseling in the 12 months prior to the interview. The majority of the women were insured in which 62% reported having private insurance, 18% reported having public insurance and 19% reported no insurance. Nearly three-fourths of the women reported they were consistently insured during the 12 months prior to the interview. With respect to sociodemographic characteristics, 17% of the female respondents were Hispanic, 14% were non-Hispanic black, 61% were non-Hispanic white, and 8% identified as non-Hispanic "other." The age of the respondents was evenly distributed, and the mean age was 29.7 years old. The majority of the women reported that they resided in an urban area (78.5%) and spoke English during the interview (93%). 44% of the women interviewed were married, 45% were single, and 11% reported that they were cohabitating. In addition, 86% of women reported that they had engaged in sexual intercourse, 55% reported multiple sexual partners and the mean number of lifetime pregnancies was 1.8 per woman.

Results of the multivariate logistic regression analysis are presented in Table 2. Contrary to hypotheses, health insurance type or status was not significantly associated with women's receipt of EC counseling. Specifically, women who had public insurance (AOR=1.63, 95%

CI=0.75-3.52) or private insurance (AOR=1.80, 95% CI= 0.75-4.32) were not more likely to have received EC counseling compared to their peers who were uninsured. Furthermore, women with consistent insurance over the prior 12 months were not more likely to have received EC counseling than those women with inconsistent coverage (AOR=0.76, 95% CI=0.45, 1,30). With respect to the control variables, the following groups of women from the selected independent control variables were more likely to report that they had received EC counseling in the past year: Hispanic race/ethnicity (versus non-Hispanic white), non-Hispanic other race/ethnicity (versus non-Hispanic white), urban residency, ever had sex, and multiple lifetime sex partners. The following groups of women were less likely to have received EC counseling in the past year: lower income (0-100% income-to-poverty ratio, 101-200% income-to-poverty ratio, 301-400% income-to-poverty ratio versus 400% and greater), and increasing age.

Table 2

Odds ratios and 95% confidence intervals from multivariate logistic regression analyses examining associations between health insurance coverage and consistency (independent variables of interest), independent control variables and receipt of EC counseling (outcome variable)

Characteristic	Receipt of EC counseling OR (95% CI)
Type of current insurance coverage	
Private	1.80 (0.75-4.32)
Public	1.63 (0.75-3.52)
Uninsured (ref)	1.00
Consistency of insurance coverage	
Continuous	0.76 (0.45-1.30)
Inconsistent (ref)	1.00
Race/ethnicity	
Hispanic	2.49 (1.54-4.02)**
Non-Hispanic Black	1.12 (0.64-1.94)
Non-Hispanic Other	3.39 (1.85-6.21)**
White (ref)	1.00
Marital Status	
Married	0.58 (0.34-1.01)
Unmarried (ref)	1.00
Income-to-poverty ratio	
0-100%	0.48 (0.25-0.91)*
101-200%	0.45 (0.23-0.91)*
201-300%	0.51 (0.25-1.00)

301-400%	0.47 (0.23-0.96)*
Residency in urban area	2.67 (1.10-6.45)*
Ever had sex	6.15 (3.05-12.38)**
Multiple lifetime sex partners	1.60 (1.06-2.43)*
Number of previous pregnancies	1.08 (0.91-1.28)
Spanish-speaking	1.89 (0.86-4.20)
Cohabitating	1.12 (0.72-1.78)
Age	0.90 (0.88-0.93)**

ref, reference category.
* p<.05

**p<.001

4. Discussion

The findings of this study revealed that type of insurance (public, private, none) or consistency of insurance over 12 months were not significantly associated with the receipt of EC counseling. These findings are in contrast to hypotheses that women with private or public insurance or consistent insurance coverage would have been more likely to receive EC counseling. Although insurance may have no affect on counseling receipt, several factors may have played a role in our ability to detect a significant association. First, because there was such a low prevalence of women who reported actually having received counseling, the ability to detect a significant relationship between health insurance and EC counseling may have been limited. Thus, insurance may have no significant effect because too few women receive EC counseling. The NSFG data only enables examination of a woman's receipt of EC counseling within the past 12 months, which may account for the low prevalence reported. A respondent may have received counseling more than 12 months ago, or they may not have had a chance to visit their health care provider yet regarding contraception prior to the NSFG interviews. Longitudinal studies may improve the ability to determine if insurance affects a woman's receipt of EC counseling. Second, measurement of EC counseling receipt was based on self-report and some women may have not realized they were receiving counseling at a specific time or they may have forgot, which would have led them to answer "no" to the question asking about

their receipt of EC counseling. Thus, measurement error could have biased our findings. Third, prior research has shown that a usual source of care is more strongly associated with the receipt of any preventive counseling than insurance alone [13]. A previous study indicated that the subjects with both insurance and a usual source of care were more likely than those subjects who only identified having insurance and no usual source of care to receive any preventive health counseling [13]. Thus, future research should consider including other health-care related factors, such as usual source of care and perhaps type of provider (e.g. physician, nurse practitioner, pharmacist) to explore potential interactions with health insurance.

Several findings related to the control variables warrant discussion. Specifically, findings indicated low and lower income women were less likely to report having received EC counseling compared to those in the highest income group (income to poverty ratio 401% and higher). These findings are in accordance with previous research [8] and may be due to the fact that EC is available as an over the counter drug that does not require a prescription, thus insurance does not cover any of the cost and the consumer is responsible for paying the entire market value of the drug. Plan B One-Step ® typically ranges in price from $40-$50 at pharmacies for a single pill, which may be too much of a financial burden for women in the lower income groups to justify purchasing it. Therefore, it is possible that the women in the lower income groups did not receive EC counseling because the provider may have assumed they could not afford the cost of the pill, or they could not afford to visit a healthcare provider from whom they could have received counseling. In addition, women at increased risk for unintended pregnancy were more likely to report having received EC counseling (e.g. sexually active, increased number of partners and pregnancies). However, EC counseling should be provided to all women regardless of risk as effectiveness of the method is highest when taken within 72 hours of unprotected sex [5].

In addition to the aforementioned limitations (e.g. self-reported data; low prevalence of counseling), this study was limited by the cross-sectional study design and precludes causal inference. In addition, information regarding the types of services covered under the insurance plans (e.g. contraceptive counseling) is not available in the NSFG data. However, variation in coverage benefits could influence the findings. Last, this study examined the receipt of EC counseling by health care provider in the prior 12 months among all women of reproductive health age regardless of their health care history. Thus, future research also should consider examining a subsample of women who reported having received health care in the past year and also the type of care received (preventive versus illness).

Despite these limitations, the findings of this study indicated only 3% of women of reproductive health age reported having received EC counseling the prior 12 months. Thus many women may be unaware that a post-intercourse form of contraception exists, which could consequently increase their risk for an unintended pregnancy [6].

Research shows that while counseling may not necessarily have a direct effect on the rate of unintended pregnancies, it does have an impact on a woman's knowledge regarding contraceptive methods and her contraceptive practices [16]. However, studies have found that providers with inadequate knowledge of how EC works and when it can be used are some of the most significant barriers to a woman's use of EC [11]. Also, some providers may have the misconception that EC is the abortion pill, mifepristone, and their personal feelings about abortion may lead them to not include EC counseling in their care of females of reproductive age [17]. Consequently, healthcare provider interventions designed to increase EC counseling tailored to each woman receiving care are necessary in order to enable women to make educated decisions regarding available methods of pregnancy prevention. A previous study implemented a year-long intervention to educate healthcare providers who work in obstetrics and gynecology, primary care, emergency medicine, and pediatrics about EC. Healthcare

providers in these specific specialties were chosen because these are the providers women visit most commonly following unprotected sex or contraceptive failure [11]. Their findings showed that the in-service training did in fact have a significant effect on the providers' knowledge regarding EC, but providers were still not entirely aware of the side effects and mechanism of action of the drug [11]. For this reason, providers who are most likely to come in contact and treat women who are potential users of EC need extensive education about EC so they can effectively educate their patients.

While insurance was not found to be a significant factor in our study regarding a woman's reported receipt of EC counseling, it is important to note how important health insurance is in preventive care. Of the women interviewed for the 2006-2008 NSFG, 19% were uninsured. Especially with the passage of the Patient Protection and Affordable Care Act in 2010, preventive healthcare has become a major priority [18]. Contraception methods and counseling are just two of many provider interventions during a well-woman exam that must be covered by insurance by August 1, 2012 [18]. With this new policy in place, providers should be discussing available contraceptive methods to women who are sexually active and at risk of an unintended pregnancy in order to facilitate a better understanding of what options a woman has regarding pregnancy prevention. Hopefully with this policy in place, future data collected from the NSFG will reflect a higher percentage of women reporting that they have received EC counseling from their healthcare provider. The prevention of unintended pregnancy has been identified as one of the goals Healthy People 2020 [4] as approximately half of all pregnancies in the U.S. are unintended [2]. Proper counseling from a healthcare provider regarding contraceptive methods that can be used following unprotected sex or contraceptive failure— specifically EC— provides women with greater knowledge to avoid an unintended pregnancy.

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